

# ROCKY FLATS SITE

## REGULATORY CONTACT RECORD

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**Purpose:** Grading the Slump Area South of FC-4 and Former Building 991

**Contact Record Approval Date:** September 27, 2007

**Site Contact(s) / Affiliation(s):**

Scott Surovchak, DOE  
John Boylan, S.M. Stoller  
Rick DiSalvo, S.M. Stoller

**Regulatory Contact(s) / Affiliation(s):**

Carl Spreng / CDPHE

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### Discussion

The hillside slump south of the location of former Building 991 on the south side of Functional Channel (FC)-4, which began developing in 2006, needs to be regraded and seeded to stabilize the hillside and address worker safety and aesthetic concerns. The slumping is likely due to water saturation of the soils caused by disruption of the French drain underlying the hill and removal of the outfall associated with the drainage during closure. The hillside was constructed as part of the former Protected Area security fencing installation in the 1970s. The regrading is anticipated to make the topography of the area similar to that which existed prior to the hillside construction. Sentinel well 45605 is located within the slumping area; its casing is no longer vertical and the stress caused by the slumping is affecting its long-term serviceability. This well needs to be replaced after the grading work is completed. Other than the Sentinel well location, movement of the soils creating the slump does not affect the implementation of the remedy.

The excavation work will exceed the 3-foot-depth limit specified by the institutional controls (Rocky Flats Legacy Management Agreement [RFLMA], Attachment 2, Table 4, Institutional Control 2) and thus requires pre-approved procedures.

DOE, CDPHE, and Stoller staff informally consulted on August 30, 2007, on the regrading concept, and the attached S.M. Stoller Conceptual Design shows the grading location, depth of excavation, and placement of fill based on the outcome of those discussions. Note that Design Sheet 3 also shows the location of former Individual Hazardous Substance Site (IHSS) 154, the Pallet Burn Site, which is discussed in more detail below.

The regrading is projected to generate approximately 7,000 cubic yards of excess material. This soil will be spread at and adjacent to the former 903 Pad area (refer to Design Sheet 8), which will facilitate revegetation efforts in this area. The fill placement activity will conform with the applicable institutional controls, and the final elevation after fill placement and reseeded is expected to be slightly above the existing elevation. Erosion controls for the regrading excavation and fill activities will be employed in accordance with the Central Operable Unit (OU) Erosion Control Plan.

CDPHE approval for this work is requested before final design and procurement activities proceed. It is anticipated that the construction work will be completed in November 2007.

The objective of the institutional control is to maintain the current depth to subsurface contamination or contaminated structures. This control also results in achieving compliance with the CDPHE risk management policy of ensuring that residual risks to the site user are at or below  $1 \times 10^{-6}$ . Based on a review of the location of the regraded area, the limited aerial extent, and the minor change in depth to subsurface contamination, the regrading does not impact compliance with the risk management policy.

CDPHE has requested that the following information be included in contact records for soil excavation related to this institutional control that will not return soil to the preexisting grade:

*1 - Provide information about any remaining subsurface structures in the vicinity so that the minimum cover assumption will not be violated (or state that there are none if that is the case).*

There are no subsurface structures in the vicinity. The slump has been informally referred to as the "Building 991 slump" for ease of reference due to its proximity to the location of former Building 991. Portions of former Building 991 remain in the subsurface, but are located north of FC-4, well outside the hillside slump regrading activity area.

*2 - Provide information about any former IHSSs/PACs or other known soil or groundwater contamination in the vicinity (or state that there is no known contamination).*

The following IHSSs/Potential Areas of Concern (PACs) are in the vicinity of the hillside slump regrading activity area:

- IHSS 154 (PAC 900-154), Pallet Burn Site – Oil-contaminated pallets and other wood debris were burned in this area, which is located south of the slumping soils, just north of FC-5. The conceptual design drawing (Sheet 3) shows that the extent of regrading just touches the northern extent of IHSS 154, approximately between the southern end of Sections E and F (Sheets 6 and 7). Burning activities were conducted in 1965 and the area was removed sometime in the 1970s. Characterization of this IHSS in 2002, as part of IHSS Group 900-2, resulted in three of six sample locations with detectable levels of arsenic, and two of the three locations had arsenic above the wildlife refuge worker (WRW) soil action level specified in the Rocky Flats Cleanup Agreement (RFCA), both at depths greater than 4.5 feet below the surface.

Detected arsenic concentrations in the three locations ranged from 15.3 to 55.1 milligrams per kilogram (mg/kg). The two sample concentrations above the WRW RFCA soil action level of 22.2 mg/kg were 24.1 and 55.1 mg/kg. Based on the RFCA Attachment 5 Subsurface Soil Risk Screen, soil removal was not required because of the depth of the samples with concentrations above the WRW RFCA soil action level and because the IHSS was not in a significant erosion area, as identified in RFCA Attachment 5. No Further Accelerated Action was approved by CDPHE in 2002.

The proposed regrading may remove some soil adjacent to IHSS 154, but this would not significantly decrease the elevation of soils within IHSS 154. Prior to regrading, the

boundaries of IHSS 154 will be surveyed and marked. No excavation will take place inside the IHSS boundary.

- IHSS 192 (PAC 000-192), Antifreeze Discharge – On December 2 or 3, 1980, approximately 155 gallons of antifreeze solution, 25% ethylene glycol in water, were discharged from a brine chiller evaporator into a floor drain in former Building 708. The floor drain discharged into a buried culvert, which subsequently discharged into South Walnut Creek. The discharge was impounded in Pond B-1 and 5,000 gallons of water were flushed through the drainage system into Pond B-1. Based on the degradation model for ethylene glycol, it was predicted to reach undetectable levels in leachate and soil within 1 week of the discharge.

IHSS 192 was part of OU 16, Low Priority Sites, and a No Action remedy for this IHSS was approved in the 1994 OU 16 Corrective Action Decision/Record of Decision.

- PAC 000-503, Solar Pond Water Spill Along Central Avenue – In 1994, a tanker truck transporting water from the Solar Evaporation Ponds to the former Building 374 storage tanks spilled approximately 35 gallons over a 0.5-mile stretch of asphalt on Central Avenue. The spilled water was cleaned up from the asphalt. No Further Accelerated Action was approved by CDPHE in 2002.

More detailed information on these PACs/IHSSs and the disposition of these areas is provided in the Historical Release Report, Appendix B of the Remedial Investigation/Feasibility Study Report.

*3 - Resurvey any new surface established in subsurface soil, unless sufficient existing data is available to characterize the surface (or state that the excavated soil will be replaced and the original contours restored).*

When completed, the new surface elevations will be consistent with the final design drawings for the regrading work. Final elevations will be surveyed and the resulting data will be used to update the Central OU topography maps.

## **Resolution**

Carl Spreng, CDPHE, approved the regrading work as described in this Contact Record.

**Contact Record Prepared by:** Rick DiSalvo

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## **Distribution:**

Carl Spreng, CDPHE  
Scott Surovchak, DOE  
Linda Kaiser, Stoller  
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